



# VNIX UPDATE

## VIETNAM NATIONAL INTERNET EXCHANGE (VNIX)

**Presented at APNIC20 - 08 Sep, 2005 in Hanoi,  
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# Introduction

- ◆ VNIX = Vietnam National Internet Exchange.
- ◆ 2 VNIX points:
  - One in Hanoi formed in 08 Nov, 2003.
  - The second in HoChiMinh city formed in 10 Mar, 2004.
- ◆ Established by VNNIC but funded by Government budget.
- ◆ Some main reasons:
  - Quality of services.
  - International Internet bandwidth.
  - Backup connectivity.
  - Domestic contents.
  - New technology R&D....



# Current status

(Operation)

- ◆ All 6 IXP members connect directly to VNIX.
- ◆ 4 multihomed Net connect indirectly to VNIX via above IXPs.
- ◆ Transmission infrastructure: All optical fiber.
- ◆ Port speed: 100/1000Mbps.
- ◆ Total traffic has been exchanged through VNIX from the beginning to 31 Jul, 2005: *~1700538.6Gbytes*.
- ◆ Peak traffic of the biggest IXP: *~560Mbps*.



# Current status

(Available resources)

- ◆ Central switching: 2 Cisco6509, optical and copper ports, speed 100/1000Mbps.
- ◆ Routing management (route server): 2 Cisco2621.
- ◆ Traffic monitoring: IBM/Sunfire server.
- ◆ Space room, rack mount; air-conditioner, UPS, helpdesk and monitoring 24/24.
- ◆ Backup power: Power regenerator.
- ◆ ASN and reserved IP address block for point-to-point connection.



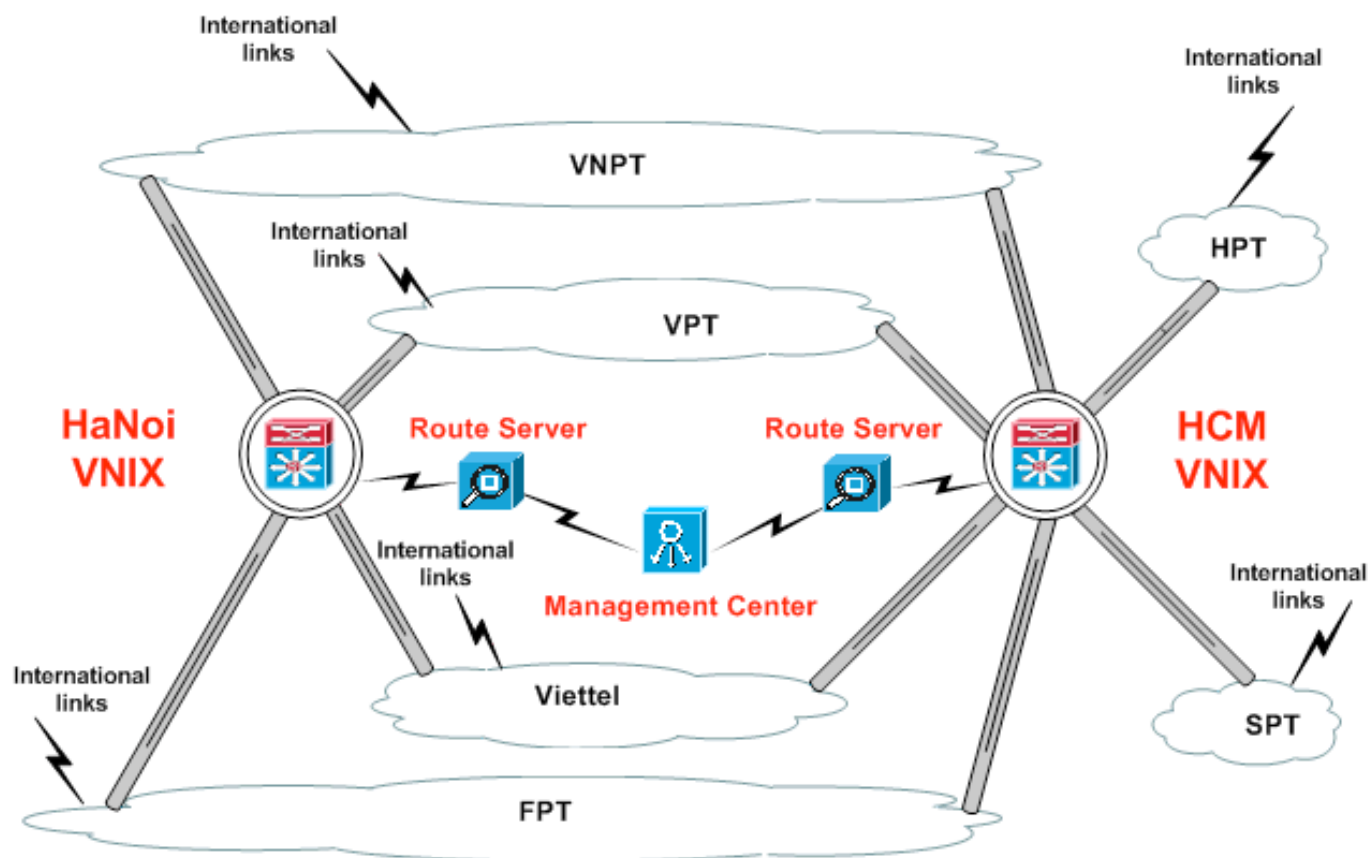
# Current status

(Connectivity)

- ◆ VNIX members in Hanoi:
  - Vietnam Posts and Telecommunications (VNPT).
  - Viettel Corporation (Viettel).
  - FPT Communications (FPT).
  - Vietnam Power Telecoms (VPT).
- ◆ VNIX members in HoChiMinh city:
  - Vietnam Posts and Telecommunications (VNPT).
  - Viettel Corporation (Viettel).
  - FPT Communications (FPT).
  - Saigon Postel Corporation (SPT).
  - Vietnam Power Telecoms (VPT).
  - Hanoi Posts and Telecoms (HPT).

# Current status

(VNIX diagram/Vietnam Internet connectivity overview)



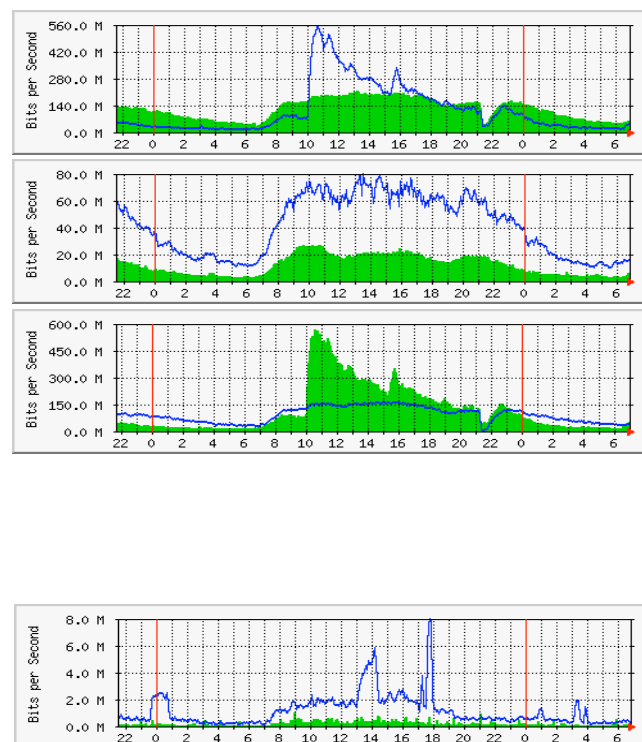


# Current status

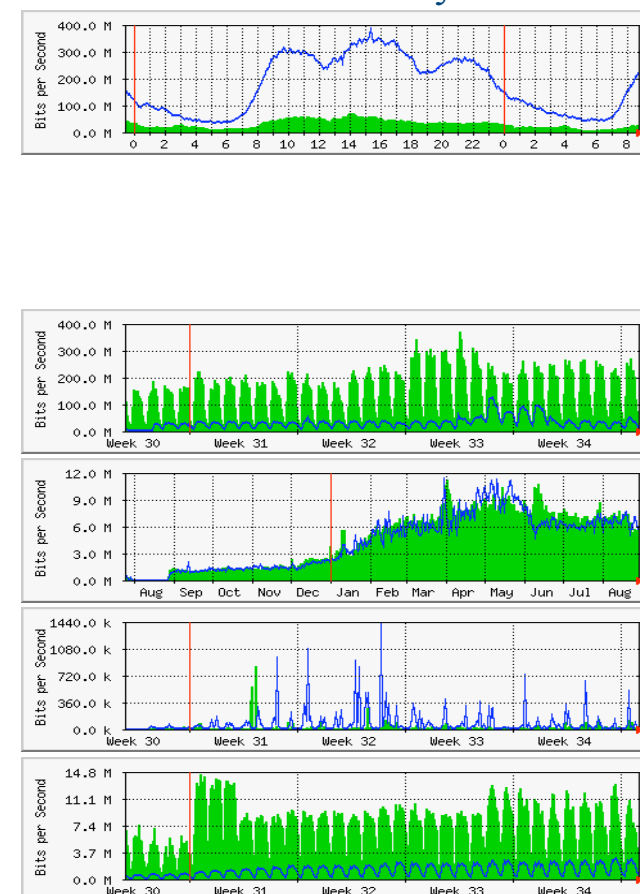
(VNIX traffic)

- ◆ VNPT (7643)
- ◆ Viettel (7552)
- ◆ FPT (18403)
- ◆ SPT (7602)
- ◆ VPT (24086)
- ◆ HPT (24088)

VNIX in Hanoi:



VNIX in HoChiMinh city:







# VNIX policy

- ◆ Neutral Internet eXchange point.
- ◆ Forced Multilateral Peering Agreement (F-MLPA).
- ◆ Free of charge.
- ◆ Minimum initial connection: 2Mbps.
- ◆ Bandwidth use ratio: < 70%.
- ◆ Routing protocol: eBGP-4.
- ◆ ASN and IP address: Independent.
- ◆ Terminal equipments and transmission: to be built by members.
- ◆ Accepting all domestic routing information.
- ◆ Supporting backdoor connections for backup.



## Next steps (planning)

- ◆ Setting up monitor tools: Routing information management server, looking glass, HPOpenView, netflow, RRdtool....
- ◆ ISPs might be considered to connect to VNIX for local Internet exchange.
- ◆ Supporting IPv6 R&D.
- ◆ Supporting Multicast R&D.
- ◆ Mirroring DNS root server.
- ◆ Cooperating with International IX in R&D.



# Conclusion

- ◆ Bettering quality of service.
- ◆ Many well-known Vietnamese websites move to local service providers.
- ◆ Decreasing International Internet bandwidth.
- ◆ Strengthening the safeness and security of Vietnam Internet as well as national information resources.
- ◆ Supporting new service providers.
- ◆ Promoting new Net tech R&D in Vietnam....



**VNIX**

<http://VNIX.vn> (Just only Vietnamese Language).

**Q & A?**

**Thank you!**